

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2005/000004

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07D 215/38, C07D 401/12, C07D 409/12, C07D 417/12, A61K 31/47,
A61K 31/4709, A61P 3/04, A61P 25/18, A61P25/24, A61P25/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ, CHEM. ABS DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02058702 A1 (SMITHKLINE BEECHAM CORPORATION), 1 August 2002 (01.08.2002), see example 20, page 17, example 40d, page 23 --	1-14,16-18
P,X	EP 1464335 A2 (TAISHO PHARMACEUTICAL CO. LTD.), 6 October 2004 (06.10.2004) --	1-14,16-18
X	Jarvest, Richard L. et al, "Conformational Restriction of Methionyl tRNA Synthetase Inhibitors Leading to Analogues with Potent Inhibition and Excellent Gram-Positive Antibacterial Activity", Bioorganic & Medicinal Chemistry Letters, 2003, vol. 13, page 1265 - page 1268, see compounds 15 and 25, page 1226 --	18

☒ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

23 May 2005

Date of mailing of the international search report

23 -05- 2005

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Eva Johansson/EÖ
Telephone No. +46 8 782 25 00

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.: 15, 20
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 15, 20 relate to a method of treatment of the human or animal body by surgery or by therapy, as well as diagnostic
.../...
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The following separate inventions were identified:

I: Claims 1-18, 20 directed to compounds of formula I and their use for the treatment or prophylaxis of obesity, psychiatric and neurological disorders.
.../...

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-18, 20

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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Box II.1

methods /Rule 39.1.(iv). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 0247456 A2 (SMITHKLINE BEECHAM CORPORATION), 20 June 2002 (20.06.2002), see example 2d, page 12 --	18
X	WO 9955677 A1 (SMITHKLINE BEECHAM PLC), 4 November 1999 (04.11.1999), see example 29a, page 26, 60c, page 43, 70d, page 51, 71d, page 52 --	18
P,X	WO 2004004726 A1 (ASTRAZENECA AB), 15 January 2004 (15.01.2004) -- -----	1-14,16-18

INTERNATIONAL SEARCH REPORT
Information on patent family members

01/04/2005

International application No.
PCT/SE 2005/000004

WO	02058702	A1	01/08/2002	EP	1359915 A	12/11/2003
				JP	2004524295 T	12/08/2004
				US	6818655 B	16/11/2004
				US	20040063757 A	01/04/2004

EP	1464335	A2	06/10/2004	JP	2004300156 A	28/10/2004
				US	20040030754 A	12/02/2004
				WO	2004087669 A	14/10/2004

WO	0247456	A2	20/06/2002	AU	3950602 A	24/06/2002
				EP	1351687 A	15/10/2003
				JP	2004515507 T	27/05/2004

WO	9955677	A1	04/11/1999	AU	3523599 A	16/11/1999
				BR	9909994 A	26/12/2000
				CA	2330564 A	04/11/1999
				CN	1307565 A,T	08/08/2001
				EP	1084110 A	21/03/2001
				GB	9809050 D	00/00/0000
				HU	0103093 A	28/02/2002
				IL	138906 D	00/00/0000
				JP	2002513005 T	08/05/2002
				NO	20005400 A	26/10/2000
				PL	343680 A	27/08/2001
				TR	200003170 T	00/00/0000
				US	6320051 B	20/11/2001
				ZA	200005781 A	04/06/2001
				GB	9824571 D	00/00/0000

WO	2004004726	A1	15/01/2004	AU	2002353714 A	00/00/0000
				AU	2003281194 A	00/00/0000
				BR	0312312 A	12/04/2005
				CA	2491835 A	15/01/2004
				EP	1448988 A	25/08/2004
				SE	0202134 D	00/00/0000

Box III

II: Claim 19 directed to one or more compounds from (1S, 3S)-dibenzyl-cyclohexane-1,3-diylbiscarbamate and (1S, 3S)-cyclohexane-1,3-diamine dihydrochloride.

A partial search has been carried out, which relates to the invention I mentioned above.

The present application has been considered to contain 2 inventions which are not linked such that they form a single general inventive concept, as required by Rule 13 PCT for the following reasons:

Claims 1-18, 20 relate to the problem of treatment of obesity, psychiatric and neurological disorders. This problem appears to be solved by compounds of formula I and their use for the treatment of said diseases/disorders.

Claim 19 relates to (1S, 3S)-dibenzyl-cyclohexane-1,3-diylbiscarbamate or (1S, 3S)-cyclohexane-1,3-diamine dihydrochloride, which can be used as the intermediate compounds.

In order to fulfil the requirements of unity of invention, it is necessary that the intermediate compounds are closely interconnected with the end products. Such close connection requires that the essential structural part of the end product is incorporated by the intermediate compound. However, the present application lacks a single general inventive concept based on the above principle. This leads to the presence of the subjects listed above, each falling under its own restricted inventive concept.

Consequently, the two groups of inventions are not so linked as to form a single general inventive concept as required by Rule 13.1 PCT.